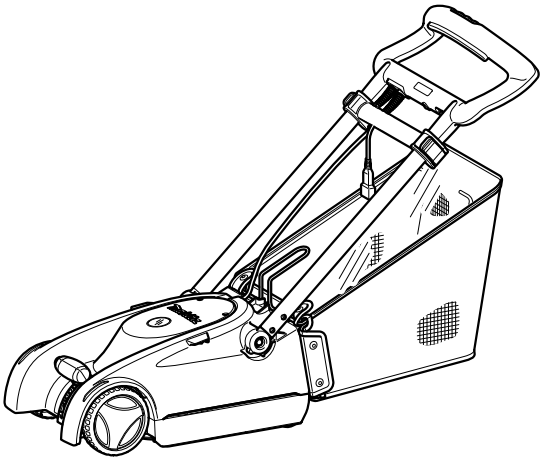
ENGLISH (Original instructions)

Electric Lawn Mower

LM2300



DOUBLE INSULATION

INSTRUCTION MANUAL
IMPORTANT: Read Before Using.

SPECIFICATIONS

Model		LM2300
No load speed		8,000 min^{-1}
Height of cut		10 mm, 15 mm, 20 mm, 25 mm, 30 mm, 40 mm
Width of cut		230 mm
Dimensions	at work (with grass basket)	833 mm x 256 mm x 661 - 900 mm
	at storage (without grass basket)	208 mm x 340 mm x 770 mm
Weight (with grass basket)		6.9 kg
Safety class		⧈/II

- Due to our continuing programme of research and development, the specifications herein are subject to change without notice.
- Specifications may differ from country to country.
- Weight according to EPTA-Procedure 01/2003

Symbols END226-1

The following show the symbols used for the equipment. Be sure that you understand their meaning before use.

... Read instruction manual.

..... DOUBLE INSULATION

Power supply ENF002-2

The tool should be connected only to a power supply of the same voltage as indicated on the nameplate, and can only be operated on single-phase AC supply. They are double-insulated and can, therefore, also be used from sockets without earth wire.

General Power Tool Safety Warnings GEA005-3

⚠ **WARNING Read all safety warnings and all instructions.** Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

The term “power tool” in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

Work area safety

1. **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
3. **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

Electrical safety

4. **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
5. **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
6. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
7. **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
8. **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
9. **If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.** Use of an RCD reduces the risk of electric shock.
10. **Use of power supply via a RCD with a rated residual current of 30 mA or less is always recommended.**

Personal safety

11. **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
12. **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.

13. **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
14. **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
15. **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
16. **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
17. **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

Power tool use and care

18. **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
19. **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
20. **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
21. **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
22. **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
23. **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
24. **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

Service

25. **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.
26. **Follow instruction for lubricating and changing accessories.**
27. **Keep handles dry, clean and free from oil and grease.**

ELECTRICAL LAWN MOWER SAFETY WARNINGS

⚠ **WARNING:**

1. Power source: Use device at the voltage displayed on the rating plate.
   - If used at a voltage in excess of displayed voltage, blade rotation speed will become extremely fast, and may cause injury.
2. Do not use or leave the electric lawn mower in the rain or damp conditions.
   - Doing so may cause a short circuit and/or electric shock.
3. Always wear long trousers and substantial footwear such as sports shoes when using the electric lawn mower.
   - This is necessary because small objects like stones are sent flying by the blade, and these may cause injury.
4. Do not use the electric lawn mower near small children and/or pets. Furthermore, never allow small children to use the electric lawn mower.
   - Doing so may cause an accident.
5. Before using the electric lawn mower, be sure to clear away debris such as small stones and sticks from the area to be cut.
   - If debris such as small stones hit the blade, they may cause injury.
6. While the blade is rotating, do not put body parts (hands, feet, face etc.) near blade or mown grass discharge vent.
   - Doing so may cause injury.
7. The blade will not stop immediately even if the device is switched OFF. Always make sure the blade has stopped completely and the power cord is unplugged from the power socket before moving, inspecting or handling the electric lawn mower.
   - Failure to do so may cause injury.
8. Do not use the electric lawn mower with the grass basket detached.
   - Doing so may cause injury.
9. When the electric lawn mower is mistakenly dropped or thrust into an object, be sure to inspect device for breakages, cracks and/or misshaping.
   - If there are any breakages, cracks and/or misshaping, continued use may cause injury.
10. When the blade has an abnormality like a crack or chip, replace it with a new one.
    - Abnormalities not only reduce the cutting effectiveness of the blade they also may cause injury.
11. Be sure to hold the electric lawn mower firmly when in use.
    - Failure to hold the device firmly will cause it to vibrate, which may cause injury.
12. Do not plug in/unplug power cord with wet hands.
    - Doing so may cause electric shock.

13. Do not secure the Lock OFF Lever once it has been slid into lock OFF position.
    • An unforeseen movement may cause injury.
14. Only use the electric lawn mower for lawn mowing (do not use it for weed cutting).
    • Using the device for weed cutting, etc. causes overloading, which may cause an accident, or injury and/or breakdown.

⚠ **CAUTION:**

1. Be sure to follow the instructions in the user's manual when attaching a blade.
    • If the blade is not attached properly, it may come off and cause injury.
2. Take care not to sever the power cord while using the electric lawn mower. If by any chance, the power cord is damaged or mistakenly severed, immediately remove the power plug from the power socket.
    • Failure to do so may cause electric shock.
3. When the device is not in use, always store indoors, but avoid the following locations.
    • Locations where children can reach and easily remove device.
    • Locations where temperature and humidity change suddenly.
    • Locations where there is a lot of moisture.
    • Locations in direct sunlight.
    • Locations where volatile materials are stored.
    • Storing the device in such locations may cause an accident.
4. Do not allow chemicals such as oil or pesticide to remain on the electric lawn mower.
    • Doing so may cause damage (discoloring, misshaping and/or cracking, etc.) to the device.
5. Inspecting screws/bolts

To ensure safe, correct use of the electric lawn mower, be sure to check screws/bolts before use, and retighten any of those that have become loose.

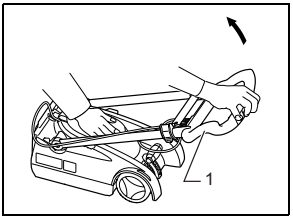
SAVE THESE INSTRUCTIONS.

⚠ **WARNING:**

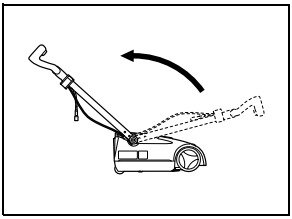
DO NOT let comfort or familiarity with product (gained from repeated use) replace strict adherence to safety rules for the subject product. MISUSE or failure to follow the safety rules stated in this instruction manual may cause serious personal injury.

OPERATING INSTRUCION

Raising handle

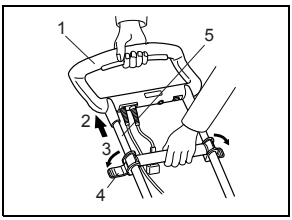


1. Handle



• Place one hand on the main unit of the device, and use the other hand to raise the handle. There is a midway securing position but ignore this and raise the handle completely until it stops.

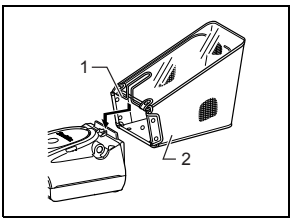
Extending handle



1. Handle
2. Extend out pipes
3. Open lock levers
4. Lock lever
5. Pipe

• Open out the lock levers on both sides of the handle and then pull the handle to extend it out. Once handle is at an easy-to-use height, close and properly secure the lock levers.

Attaching grass basket

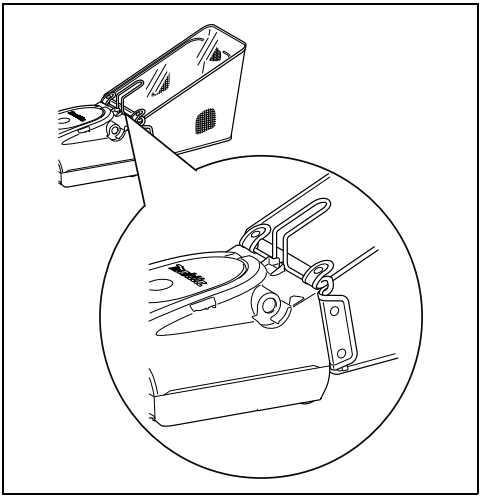


1. Frame
2. Grass basket

• The frame of the grass basket is hooked onto the rear end of the main unit of the device.

NOTE:

• Be sure to attach the grass basket in the correct position. Failure to do so may cause loss of grass basket functionality.



Set mowing height

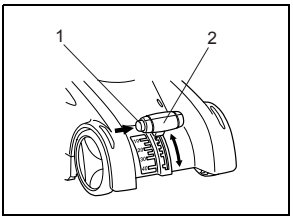
⚠ **WARNING:**

Before adjusting mowing height, turn OFF Power Switch, unplug power cord from power socket, check that the blade has come to a complete halt, and then make adjustment.

- Attempting adjustment before blade has come to a complete halt may cause injury.

Do not insert hands into gaps between wheels and main unit cover or any other narrow spaces (gaps).

- Doing so may lead to hands becoming trapped, which may cause injury. Furthermore, do not put hands under main unit of device. The blade may cause injury.



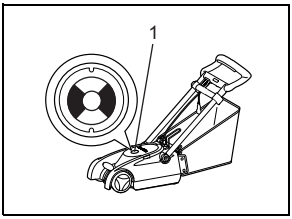
1. Lock off button
2. Mowing height adjustment lever

- There are six lawn height levels between approximately 10 mm and 40 mm to choose from when adjusting. Select desired height and adjust.
- Hold down the Lock OFF Button while moving the Mowing Height Adjustment Lever backwards or forwards to desired height setting. At this time, make sure lever fits properly into selected height notch.

NOTE:

- The mowing height figures should be used just as a guideline, as the state of the lawn or ground may cause lawn height to be slightly different to the set height figure.

Blade Status Monitoring Window



1. Blade status monitoring window

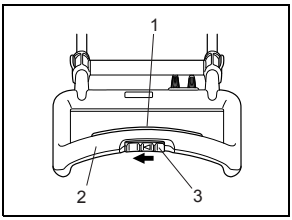
- The Monitoring Window on top of the main unit of the device enables user to check whether blade is moving or stationary.
- The blade is rotating when a red & white pattern is spinning round or a pink color can be seen.

Before handling the main unit of the device when moving after use, inspecting, changing blade, adjusting mowing height or attaching/un-attaching grass basket, etc., be sure to look into the Monitoring Window to confirm that the red & white pattern has stopped completely.

Switch action

⚠ **WARNING:**

- **Before plugging in the tool, always check to see that the switch lever actuates properly and returns to the "OFF" position when released.**



1. Switch lever
2. Handle
3. Lock off lever

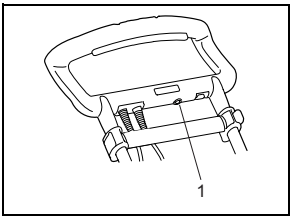
- To start the device, first slide the lock-off lever in the direction of the arrow in the figure, and then squeeze in the switch lever. To stop the device, release the switch lever. When the switch lever is released, the lock-off lever will return automatically to the locked position, and the switch lever cannot be turned ON.

Over Current Relay (motor protection mechanism)

⚠ **WARNING:**

To restore over current relay, always make sure the Power Switch is OFF, and then press the Recovery Button.

- **If the Recovery Button is pressed while the Power Switch is ON, the device will start moving suddenly, which may cause an accident.**
  When removing an object that is jamming the blade, always unplug the power cord from the power socket, and put on gloves, before unblocking.
- Failure to do so may cause injury.



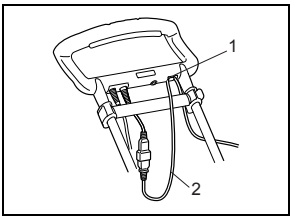
1. Over current relay

- If the electric lawn mower is used while grass cuttings and other dirt are blocking the inside of the main unit, the over current relay will operate, automatically stopping the device. In such cases, unplug the power cord from the power socket, clean out the material causing the blockage, press the Recovery Button, and then restart mowing.
- Be sure to press the Recovery Button at least ten seconds after the device has stopped.

NOTE:
- The over current relay may be activated when wet or long grass gets caught up inside of the main unit.

Connecting Extension Cord (available in market)

⚠ **WARNING:**
When connecting extension cord to the power supply cord, make sure the Power Switch is OFF and the cord is unplugged from the power socket.
- If the power connection is made with the Power Switch ON, the device will start operating suddenly, which may cause an accident.
- When connecting the extension cord to the power plug of the main unit of the device, be sure to insert the cord's plug fully.

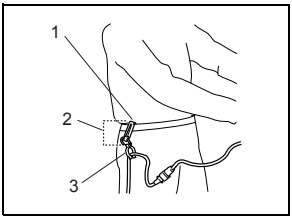


1. Hook
2. Extension cord

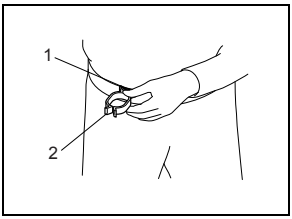
- When connecting the extension cord, hook it over the support hook as shown in the figure, to prevent inadvertent unplugging, but make sure there is no excessive strain on the plug connection.

Waist Hook for Power Cord

⚠ **CAUTION:**
Do not attach any item other than the extension cord to the holder section of the waist hook for power cord.
- Using the waist hook for power cord for purposes other than intended may cause an accident and/or injury.

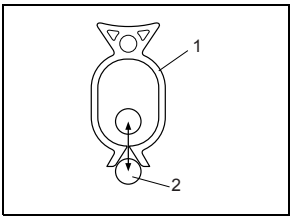


1. Hook
2. Waist hook
3. Holder



1. A section
2. Holder

- Using the waist hook for power cord helps prevent careless severing of the extension cord due to the cord being loose.
- Hook the hook section of the waist hook for power cord into clothing or belt at waist height.
- To use the Waist Hook for Power Cord, place the holder in your hand, and hook the hooked section (A section) into clothing or belt at waist height, and then clip the power cord into the holder with one touch.
- Be sure to clip in and clip out the power cord from the mouth of the holder.



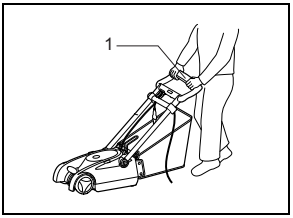
1. Holder
2. Power cord

NOTE:
- Do not apply excessive strength to the mouth of the holder. Doing so may cause misshaping or damage to the holder.

OPERATION

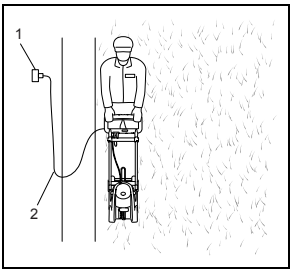
Mowing

⚠ **WARNING:**
Before mowing, clear away sticks and stones from mowing area. Furthermore, clear away any weeds from mowing area in advance.



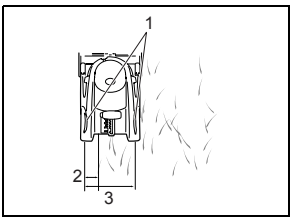
1. Handle

- Firmly hold the electric lawn mower handle with both hands when mowing.
- The mowing speed guideline is approximately one meter per four seconds.
- Start mowing from a point near to the power socket to ensure that the power cord does not become an obstacle.



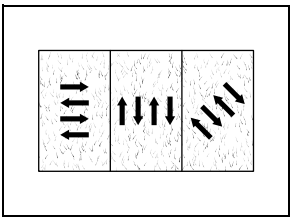
1. Power socket
2. Power cord

- Do not let the extension cord pass under or become entangled beneath the main unit of the device.



1. Mowing width labels
2. One third
3. Mowing width

- The mowing width labels on either side of the front end of the main unit provide a guideline to mowing width. Using the width labels as a guideline, mow in strips, overlapping by one half to one third the previous strip, to mow the lawn evenly.

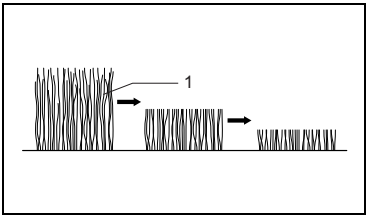


- Change the mowing angle (direction) to prevent the grass grain pattern from forming in just one direction. As the figure shows, changing the mowing angle (direction) each time the electric lawn mower is passed over the lawn will give a beautiful finish to the lawn.
- Periodically check the level of the grass basket, and empty before it becomes full.

NOTE:
- Using the electric lawn mower with the grass basket full prevents smooth blade rotation and places an extra load on the motor, which may cause breakdown.

Mowing a long-grass lawn

- Do not try to cut long grass all in one go. Instead, mow the lawn in stages, leaving it for a day or two between mows, until the lawn is evenly short.

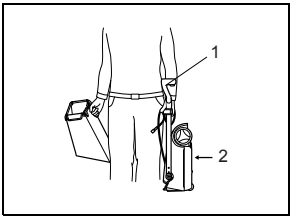


1. Grass

NOTE:
- Mowing long grass to a short length all in one go may cause the grass to die and/or block up the inside of the main unit.

Transporting

⚠ **CAUTION:**
When carrying the electric lawn mower, make sure the blade is on the outside (away from your body).
- Failure to do so may cause injury.
- To carry the electric lawn mower, secure the handle, and carry as shown in the figure.

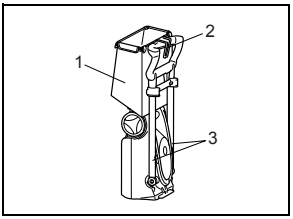


1. Handle
2. Blade is on the outside

Storing

⚠ **WARNING:**
Be careful not to trap fingers between handle and lock lever when storing away the electric lawn mower.
- If fingers do become trapped, it may cause injury.

Make sure that the handle is properly secured into the handle stoppers on both sides of the top of the main unit.
- Failure to do so may cause injury.



1. Grass basket
2. Hook
3. Handle

1. Remove the grass basket and shorten the handle. (See the section titled “Extending handle” for details.)
2. Fold down the handle and stand up the device as shown in figure.
3. Use the hook on the grass basket to hook it onto the handle as shown in the figure.

MAINTENANCE

⚠ **WARNING:**

When changing the blade or inspecting and maintaining the device, always turn OFF the Power Switch, and unplug the power cord from the power socket.

- Leaving the device plugged in may cause electric shock or other accidents.

Always check that the blade has halted before conducting above work.

- Failure to do so may cause injury.

When changing the blade or inspecting and maintaining the device, always wear gloves.

- Failure to do so may cause injury.

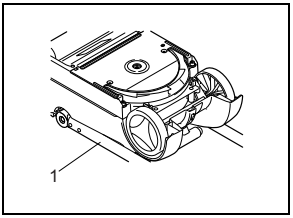
⚠ **CAUTION:**

Do not use any wrench other than the provided hex wrench (accessory) when changing the blade.

- Using a different wrench may lead to over-tightening or looseness, which may cause injury.

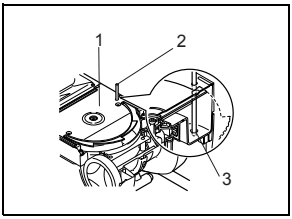
Replacing blade

1. Unplug power cord from power socket.
2. Fold down the handle and turn over the main unit of the device. (The device cannot be put in a stable position if the handle is not folded down.)



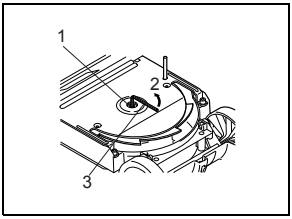
1. Handle

3. Pass the lock pin through the hole in the bottom plate and insert it into the hole in the main unit of the device.



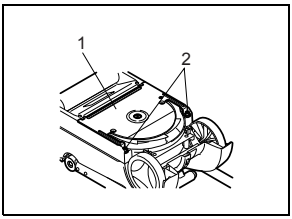
1. Bottom plate
2. Lock pin
3. Hole

4. Use the hex wrench to loosen the hexagonal bolt.

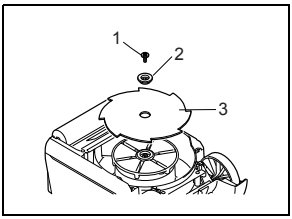


1. Hexagonal bolt
2. Loosen
3. Hex wrench

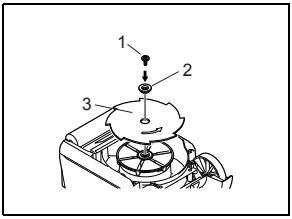
5. Loosen the two hexagonal bolts securing the bottom plate, and remove the bottom plate, hexagonal bolts and then outer flange (in that order), and replace the blade.
6. When attaching a blade, make sure the arrow on the bottom plate and the arrow on the blade are both facing in the same direction.
   Attach the blade, outer flange and hexagonal bolt (in that order), and then temporarily tighten the hexagonal bolt.



1. Bottom plate
2. Hexagonal bolt (securing bottom plate)

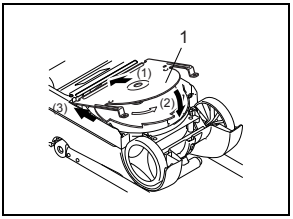


1. Hexagonal bolt
2. Outer flange
3. Blade



1. Hexagonal bolt
2. Outer flange
3. Blade

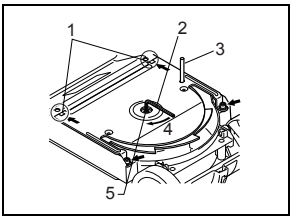
7. Attach the bottom plate in the (1) (2), (3) order shown in the figure, and then tighten the two bottom plate hexagonal bolts.



1. Bottom plate

NOTE:
- Be sure to fully clip in the notches on the bottom plate, because if the securing hexagonal bolts are misaligned and come off during mowing, this error may cause injury.

8. Insert the lock pin, and securely tighten the hexagonal bolt using the hex wrench, to secure the blade.



1. Notches
2. Hex wrench
3. Lock pin
4. Tighten
5. Hexagonal bolt

9. Remove the lock pin.

Electric lawn mower upkeep

- After mowing, use a dry cloth or cloth dipped in soapy water to wipe clean the electric lawn mower. Also, use a soft brush or other such tool to brush off grass cuttings and dirt from blade.

⚠ **CAUTION:**
Never use gasoline, benzine, thinner, alcohol or the like. Discoloration, deformation or cracks may result.

NOTE:
To maintain product SAFETY and RELIABILITY, repairs, carbon brush inspection and replacement, any other maintenance or adjustment should be performed by Makita Authorized Service Centers, always using Makita replacement parts.
- After mowing, clean away grass and dirt from locations such as intake duct. Failure to do so may cause loss of grass collecting efficiency and cooling capability.

OPTIONAL ACCESSORIES

⚠ **CAUTION:**
- These accessories or attachments are recommended for use with your Makita tool specified in this manual. The use of any other accessories or attachments might present a risk of injury to persons. Only use accessory or attachment for its stated purpose.

If you need any assistance for more details regarding these accessories, ask your local Makita Service Center.

- Lawn mower blade
- Waist cord hook

NOTE:
- Some items in the list may be included in the tool package as standard accessories. They may differ from country to country.

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